



Infrared Materials

The Leader in High Performance IR Detectors

Pbs

SHORT-WAVE IR DETECTORS

0.7 TO 3.0 MICRONS

HIGH SENSITIVITY IN THE 1 - 3 MICRON BAND

OFF-THE-SHELF AND CUSTOM DESIGNS AVAILABLE

EXCELLENT COST TO PERFORMANCE VALUE



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707-620-0160



PbS (A-SERIES) PHOTOCONDUCTIVE IR DETECTORS

Applications:

- Moisture Monitoring
- FTIR (Fourier-transform) Spectroscopy
- Fire and Spark Detection
- Temperature & Flame Monitoring
- Thermal Imaging
- Process Control Systems

Markets:

- Cotton, Paper, Pulp, Textiles
- Pharma, Food Analysis
- Industrial Safety, Manufacturing
- Combustion Efficiency, Boiler Systems
- Security, Quality Control, Automation Systems
- Steel Industry, Glass Production, Foundries



	Model Number	Element Size (mm)	Wavelength Peak Signal (μm)	D* λ _{pk} , 630Hz, 1Hz (cm Hz ^{1/2} W ⁻¹)	Responsivity λ _{pk} , 630Hz (VW ⁻¹)		Dark Resistance (MΩ)	Time Constant (μsec)	Operating Temp (°C)	ΔT at Max Cool (°C)	Standard Package Options
					Minimum	Typical					
Ambient Detectors (Uncooled)	A1-5	1 x 1	2.4 typ	8.0x10 ¹⁰ min 1.0x10 ¹¹ typ	530,000	800,000	0.2 - 3.5	100 - 400	+23	N/A	TO-5
	A2-5	2 x 2			270,000	400,000					TO-5
	A3-5	3 x 3			170,000	260,000					TO-5
2 Watt 2-Stage TE Cooled Detectors ¹	A1-7C3T	1 x 1	2.5 typ	1.0x10 ¹¹ min 1.5x10 ¹¹ typ	1,300,000	2,000,000	1.0 - 15.0	1250 - 2500	-35	55 min 60 typ	TO-37
	A2-7C3T	2 x 2			660,000	1,000,000					TO-37
	A3-7C3T	3 x 3			430,000	640,000					TO-37
3 Watt 2-Stage TE Cooled Detectors ²	A1-8C4T	1 x 1	2.7 typ	2.0x10 ¹¹ min 3.0x10 ¹¹ typ	1,400,000	2,100,000	2.0 - 20.0	1750 - 3500	-50	70 min 75 typ	TO-8, TO-66
	A2-8C4T	2 x 2			700,000	1,100,000					TO-8, TO-66
	A3-8C4T	3 x 3			430,000	650,000			-45		TO-8, TO-66

Specifications apply using a 500°K blackbody and bias of 50 V/mm across the detector and a one Megohm load resistor in series.

TE cooled specs apply at or near max. cooling from a +25°C heatsink. Units are hermetically sealed with a sapphire or silicon window.

Max. rated element temperature is +75°C.

¹ Typical max. cooling power 0.9V at 1.2A

² Typical max. cooling power 1.8V at 1.2A

Typical Industry vs. Infrared Materials Performance

